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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,239	06/09/2000	Yoshihiro Hirano	P/2007-63	3197

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EXAMINER	
SHOSHO, CALLIE E	
ART UNIT	PAPER NUMBER
1714	15

DATE MAILED: 05/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/591,239	Applicant(s) HIRANO ET AL.	
	Examiner Callie E. Shosho	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-8,11,13 and 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-8,11,13 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 2/19/03.

The new grounds of rejection as set forth below are necessitated by applicants' amendment and thus, the following action is final.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 6, 8, and 11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,376,582 (Iwata et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other for the reasons set forth in paragraph 3 of the office action mailed 8/26/02, Paper No. 12.

NOTE: In response to the above double patenting rejection, applicants state on page 3 of the amendment filed 2/19/03 that a terminal disclaimer has been submitted. However, no such terminal disclaimer has been found by the examiner and thus, the above rejection remains. Of course, once such a terminal disclaimer has been filed, the above rejection will be withdrawn.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 6-8, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 61066604 in view of Terada et al. (U.S. 5,851,325).

JP 61066604 discloses a method of manufacturing ligneous material comprising mixing first wood elements which are 15-20% acetylated and second wood elements which are not acetylated to form third wood elements and then binding the third wood elements with phenolic binder. It is further disclosed that the first wood elements are acetylated by being brought into contact with liquid that contains acetyl groups. It is noted that since the first wood elements has

15-20% degree of acetylation and second wood elements are not acetylated, the average degree of acetylation of the third wood elements, i.e. produced by mixing first wood elements and second wood elements, is 7.5-10%.

The difference between JP 061066604 and the present claimed invention is the requirement in the claims of specific type of binder.

Terada et al., which is drawn to molded wood product, disclose using binder which comprises polyisocyanate and phenol resin in ratio of 3/1 to 1/3, preferably 1/1. It is further disclosed that only the combined use of polyisocyanate and phenol resin allow for molding at reduced temperatures so that the molded wooden product having more satisfactory strength can be obtained and that it is advantageous to use combination of phenol resin and polyisocyanate as compared to using polyisocyanate or phenol resin alone (as disclosed by JP 61066604) (col.3, lines 39-60).

In light of the motivation for using specific binder disclosed by Terada et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use binder which is combination of polyisocyanate and phenol resin in JP 61066604 in order to produce product with suitable strength, and thereby arrive at the claimed invention.

6. Claims 6-7, 11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07124913 in view of Terada et al. (U.S. 5,851,325)

JP 07124913 discloses a method comprising binding first wood fibers that are 10-30% acetylated and second wood fibers that are not acetylated with phenolic binder to form a composite. It is further disclosed that the first wood elements are acetylated by being brought

into contact with liquid or gas that contains acetyl groups. The wood fibers are produced from wood chips and have diameter of 0.1 mm to 0.7 mm (abstract, paragraphs 8, 12-14, 18, and 21). It is noted that since the first wood fibers have 10-30% degree of acetylation and second wood fibers are not acetylated, the average degree of acetylation of the composite, i.e. produced by mixing first wood elements and second wood elements, is 5-15%.

The difference between JP 07124913 and the present claimed invention is the requirement in the claims of specific type of binder.

Terada et al., which is drawn to molded wood product, disclose using binder which comprises polyisocyanate and phenol resin in ratio of 3/1 to 1/3, preferably 1/1. It is further disclosed that only the combined use of polyisocyanate and phenol resin allow for molding at reduced temperatures so that the molded wooden product having more satisfactory strength can be obtained and that it is advantageous to use combination of phenol resin and polyisocyanate as compared to using polyisocyanate or phenol resin alone(as disclosed by JP 07124913) (col.3, lines 39-60).

In light of the motivation for using specific binder disclosed by Terada et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use binder which is combination of polyisocyanate and phenol resin in JP 07124913 in order to produce product with suitable strength, and thereby arrive at the claimed invention.

Response to Arguments

7. Applicants' arguments regarding Iwata et al. (U.S. 6,376,582) have been considered but they are moot in view of the discontinuation of the use of this reference against the present claims.

8. Applicants' arguments filed 2/19/03 have been fully considered, but with the exception of arguments regarding Iwata et al., they are not persuasive.

Specifically, applicants argue that:

(a) neither JP 07124913 nor JP 61066604 discloses binder as presently claimed.

(b) There is no disclosure in either JP 07124913 or JP 61066604 that the average degree of acetylation measured in weight % gain of the composite is 7-18%.

With respect to argument (a), it is agreed that there is no disclosure in either JP 07124913 or JP 61066604 of binder as presently claimed. That is why each of JP 07124913 or JP 61066604 is now used in combination with Terada et al. which teaches the use of binder as presently claimed.

With respect to argument (b), it is noted that paragraph 18 of JP 07124913 disclose the degree of acetylation of the first wood fibers is 10-30% based on the weight rate of increase. Since the first wood fibers have 10-30% degree of acetylation and second wood fibers are not acetylated, it is the examiner's position that, absent evidence to the contrary, the average degree

of acetylation of the composite, i.e. produced by mixing first wood elements and second wood elements, is 5-15%.

With respect to JP 61066604, applicants argue that JP 61066604 measure the degree of acetylation of the wood chips based on percentage of acetylation of hydroxyl groups in cellulose not by weight percent gain and further, that there is no disclosure that the average degree of acetylation measured in weight percent gain of the composite is 7-18%.

It is agreed that JP 61066604 discloses the degree of acetylation in terms of the percentage of acetylated OH groups and it is further agreed that the percentage of acetylated OH groups is not equivalent to the percentage of weight gain. However, given that JP 61066604 disclose forming the acetylated first wood element by a process identical to that presently claimed, i.e. acetylating by placing the wood elements in liquid which contains acetyl groups and further given that JP 61066604 disclose the same acetylating agent as utilized in the present invention, i.e. acetic anhydride, it is clear, absent evidence to the contrary, that the wood elements of JP 61066604 would intrinsically be acetylated to the same degree, as measured in weight percentage gain, as the presently claimed wood elements.

In light of the above and given that the first wood elements has 15-20% degree of acetylation and second wood elements are not acetylated, it is the examiner's position that the average degree of acetylation is 7.5-10%.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Callie Shosho

CS
May 9, 2003

Callie E. Shosho
Examiner
Art Unit 1714